

LAMINATED TEXTILE FABRICS FOR USE IN
AIR HOLDING VEHICLE RESTRAINT SYSTEMS

ABSTRACT OF THE DISCLOSURE

This invention relates to automotive protective devices such as inflatable air bags, side air curtains, or the like. More particularly, the invention relates to laminated textile fabrics for use in side air curtains. The invention also provides a composite film product having adhesive and sealing properties useful in the manufacture of these products and a method of manufacturing said composite film product. According to the method of making the side air curtain, an adhesive polycarbonate polyurethane, polyether polyurethane or polyester polyurethane prime coat layer is first coated onto the textile substrate, and then a polymeric film, such as polyamide, polyolefin, polyester, polyether, polycarbonate or polyurethane is laminated thereto. The prime coat adhesive layer is applied to the textile substrate, which can be non-woven or woven nylon, polyester, or other synthetic fiber, through rotogravure or direct coating and allowed to dry. A polymeric film is applied to the prime-coated textile substrate by means of hot film lamination, through the use of heat and pressure. According to an alternative embodiment of the invention, a multi-layered composite film product is disclosed, which can be used as a film laminate without the need for a prime coat adhesive layer being first applied to the textile substrate. In such case, the adhesive prime coat is applied to the textile substrate in a single step via the film laminate itself. The methods and products of this invention thus permit a side air curtain to be pre-configured or prefabricated to numerous varied designs and shapes prior to coating that would otherwise not be possible, and will result in economies of operation and cost of manufacturing.